

# Food Diversion Through Animal Feed

### Animals Need Food, Too

Does your business or institution dispose of bakery or food preparation wastes, or post-consumer food scraps that might be used as animal feed?

Diverting food scraps to animal feed can help food generators by:

- Decreasing disposal costs.
- Assisting local governments in meeting mandated waste reduction goals.
- Earning payment for food residuals.
- Enhancing food generators' public image.
- Supporting local farmers, dairies, or livestock producers.

The two main ways to divert food to animal feed are 1) direct feed to animals, and 2) converting residuals to a grain supplement, which is then fed to animals.

Food scraps include anything from plate scrapings (postconsumer) to produce culls to food processing waste (preconsumer). Key factors in deciding whether this diversion option works for you are the quality of the food residuals, rate of generation, and existence of animal feed operations in your area.

Animal feed can be a viable option if a significant quantity of food residuals is generated on a regular basis and storage space is available to keep the material fresh until it can be transported.

### Direct Feed to Animals

Farmers and ranchers can supplement their livestock's diet with the right type of food scraps, given a consistent supply. Food material generators and farmers or ranchers often have an

informal arrangement. The generator must find a farmer willing to take the food scraps.

### Pigs Are Swine By Me

Some hog farmers participate in the "Garbage Feeding Program" administered jointly by the U.S. Department of Agriculture (USDA) and the California Department of Food and Agriculture (CDFA). This program requires a license and regular inspections. The collector must heat-treat all post consumer food scraps and food scraps that have been in *any* contact with meat scraps. The materials must be heated to 212 degrees Fahrenheit for 30 minutes prior to feeding it to swine.



This heat treatment prevents potential transmission of diseases such as Trichonella, enteric coliform bacteria, swine fever, and foot and mouth disease. Food scrap generators should verify licensing prior to making arrangements with any pig farmer. Licensing is obtained through the CDFA for \$20 per year and includes a booklet that describes how to set up a heating or steaming system.

For more information and applications, contact:  
CDFA, Animal Health Branch  
1220 N Street, Room A107  
Sacramento, CA 95814  
(916) 654-1447

To locate a licensed pig farmer in your area, call the CDFA Animal Health Branch at (916) 654-5225.

### Four Stomachs Are Better Than One

Cattle, sheep, and other ruminants are more restricted in what they can eat, but many dairy farmers or ranchers will accept certain types of food residuals as a feed supplement. If you have preconsumer vegetable material, such as produce

culls or a fruit or vegetable processing byproduct, it may be suitable for a local farm or ranch. Many types of food scraps can be fed directly to ruminants; however, some are not acceptable to cattle. To prevent the transmission of disease, ruminants should never be fed anything containing mammalian flesh. Also, certain vegetables such as onions or garlic are known to taint the flavor of milk from dairy cows.

Contact a local dairy farmer, sheep ranch, or cattle rancher (or their animal nutritionist) to determine if your food scraps are appropriate for ruminants.

### ***Poultry and Other Flying Objects***

Chickens, turkeys, ducks, and geese love most fresh foods and have a broad diet. They can eat spaghetti with tomato sauce, steamed brown rice, grapes, fresh greens and lettuce, chopped cooked potatoes, corn cobs, apple cores, whole grain bread, raw tomatoes, and their own eggs hard-boiled, including the ground shells. Kelp or blood meal are good sources of needed minerals. Any egg, meat, blood, or feather meal must be cooked to prevent the spread of disease. It is also important to note that chickens should be fed fresh, pre-consumer foods, not plate scrapings or foods that have spoiled.

### ***Exotic Animals***

Exotic or less common animals at zoos and specialty farms may be potential consumers of unwanted food residuals. Some exotic animals have diets that allow them to eat foods unsuitable for traditional farm animals, such as citrus fruits. Check with local farms and zoos to see if the material you have is suited for these animals.

### ***Locating an Interested Livestock Farmer***

To locate other on-farm options, look in the yellow pages for the local University of California Agricultural Extension Office.

### ***Feed Manufacturers***

Ever wonder what animal feed is made of? While most feed is made from agricultural crops such as alfalfa, corn, wheat, soy, and rice, some also contains food residuals from large bakeries, food

processing plants, rendering plants, and sometimes even candy factories.

Animal feed manufacturers that use food residuals combine foods to make a “recipe” that is appropriate for specific animals. If the supplier has a surplus that is high in proteins and/or carbohydrates, there is a chance they may receive payment for the material. Bakery wastes in particular are of interest to many animal feed manufacturers, as well as other dry, high-protein and/or carbohydrate materials.

For more information regarding feed manufacturers, please call:

California Grain and Feed Association  
1521 I St.  
Sacramento, CA 95814  
(916) 441-2272

### ***Prevent Spread of Diseases***

Not all food residuals are suitable for animals. For example, no vessel or aircraft waste, whether it is foreign or domestic in origin, should ever be fed to livestock. Serious animal diseases are spread by this illegal practice. As mentioned above, ruminants should not be fed anything containing mammalian protein due to the risk of Bovine Spongiform Encephalitis, or “Mad Cow Disease.” Also, all animal products should be cooked to prevent the spread of other diseases such as Salmonella, Trichonella and Exotic Newcastle Disease.

### ***Rendering***

If you have excess grease or uncooked meat, bone or animal blood, contact a local renderer for collection. These companies collect and process these materials into feedstock for a variety of products, usually for a small fee. Improper disposal of grease can cause many environmental problems and is a leading cause of beach closures. Rendering companies are listed in the yellow pages under “rendering” or “grease collection.” The CIWMB Web site has a statewide listing at [www.ciwmb.ca.gov/FoodWaste/Render.htm](http://www.ciwmb.ca.gov/FoodWaste/Render.htm).

## Publications

“Managing Food Scraps as Animal Feed,” U.S. EPA WasteWiSe tipsheet (EPA530-F-96-037). Call 1-800-372-9473 for a copy.

“Risk Assessment Focus: Producer Questionnaire”

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services, CEAH, ATTN: CADIA  
2150 Center Ave, Bldg. B  
Fort Collins, CO 80526  
(907) 494-7000

[www.aphis.usda.gov/vs/ceah/cadia/rarc1.htm](http://www.aphis.usda.gov/vs/ceah/cadia/rarc1.htm)

Risk of Feeding Food Waste to Swine: Public Health Diseases

[www.aphis.usda.gov/vs/ceah/cadia/rarc2.htm](http://www.aphis.usda.gov/vs/ceah/cadia/rarc2.htm)

“Preventing Bovine Spongiform Encephalopathy ‘Mad Cow Disease,’ ” California Department of Food and Agriculture, Animal Health and Food Safety Services, Animal Health Branch  
1220 N Street, Room A-107  
Sacramento, CA 95814  
(916) 654-1447 or [www.cdffa.ca.gov](http://www.cdffa.ca.gov)

## For More Information

The Food Scrap Management Program maintains a Web site at [www.ciwmb.ca.gov/FoodWaste/](http://www.ciwmb.ca.gov/FoodWaste/) that offers resources for food scrap generators. For more information, please call CIWMB staff at (916) 341-6596.

**The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut energy costs, Flex Your Power and visit [www.consumerenergycenter.org/flex/index.html](http://www.consumerenergycenter.org/flex/index.html).**